

What is claimed is:

1. A multicast data retransmission method, comprising the steps of:

(a) grouping wireless terminals based on distances between an access point and the wireless terminals and amplitudes of signals output from the wireless terminals;

5 (b) selecting a repeater to retransmit multicast packets from each group, and arranging the order in which repeaters retransmit multicast packets;

(c) creating a multicast packet train header indicating characteristics of each of the multicast packets;

(d) multicasting the created multicast packet train header; and

10 (e) retransmitting the multicast packets in the order arranged in step (b).

2. The multicast data retransmission method of claim 1, wherein step (b) further comprises the step of selecting a wireless terminal, which outputs a signal with the greatest amplitude, as the repeater from each group by determining a status of a channel
15 of the wireless terminal based on the amplitude of signal output from the wireless terminal.

3. The multicast data retransmission method of claim 1, wherein the multicast packet train header comprises:

multicast train ID information which is used to identify a multicast packet train;

20 information about the number of groups of wireless terminals, the wireless terminals being connected to a wireless network and receiving the multicast packets;

information about the number of multicast packets in each group, the multicast packet being transmitted after the multicast packet train header is multicasted; and

25 forward error correction information which is used to correct an error of the multicast packet train header.

4. A multicast data retransmission method used in a system that retransmits multicast packets by using a wireless terminal and an access point, the multicast data retransmission method comprising the steps of:

(a) receiving from the access point information on a group which the wireless terminal belongs to;

(b) if the wireless terminal is selected as a repeater that is to retransmit the multicast packets, receiving information from the access point about the order in which repeaters retransmit the multicast packets; and

(c) receiving a retransmission command from the access point and retransmitting the multicast packets to other wireless terminals.

5. The multicast data retransmission method of claim 4, wherein step (b) further comprises the step of, if the wireless terminal is not selected as the repeater, receiving the retransmitted multicast packets and discarding the retransmitted multicast packets if the multicast packets have already been received without a packet error.

6. A multicast data retransmission method, comprising the steps of:

(a) grouping wireless terminals based on distances between an access point and the wireless terminals and amplitudes of signals output from the wireless terminals; and

(b) selecting a repeater to retransmit multicast packets from each group and retransmitting the multicast packets.

7. The multicast data retransmission method of claim 6, wherein step (b) further comprises the steps of:

(b1) selecting a wireless terminal which outputs a signal with the greatest amplitude as the repeater by determining a status of a channel of the wireless terminal based on the amplitude of signal output from the wireless terminal;

(b2) determining the order in which repeaters retransmit the multicast packets; and

(b3) transmitting a retransmission command to the repeaters in the order in which the repeaters retransmit the multicast packets.

8. An apparatus for multicast data retransmission, the apparatus comprising:
5 a grouping unit which groups wireless terminals based on distances between the wireless terminals and amplitudes of signals output from the wireless terminals;

a repeater selecting and retransmission order arranging unit which selects the repeater to retransmit the multicast packets from each group, and arranges the order in which repeaters retransmit the multicast packets;

10 a multicast packet train header creating unit which creates a multicast packet train header before the multicast packets are multicasted;

a multicast packet train header transmitting unit which transmits the created multicast packet train header to all wireless terminals; and

15 a retransmitting unit which retransmits the multicast packets in the order arranged by the repeater selecting and retransmission order arranging unit, after the multicast packet train header transmitting unit multicasts the multicast packet train header.

9. The apparatus of claim 8, wherein the retransmitting unit transmits the retransmission command to a repeater, which is first to retransmit the multicast packet,
20 and transmits the retransmission command to a repeater which is second to retransmit the multicast packet.

10. A structure of a multicast packet train header used in multicast data transmission, the structure of multicast packet train header comprising:

25 multicast train ID information which is used to identify a multicast packet train;
information about the number of groups of wireless terminals, the wireless terminals being connected to a wireless network and receiving the multicast packets;

information about the number of multicast packet in each group which indicates the number of multicast packet in each group, the multicast packet being to be transmitted after the multicast packet train header is multicasted; and

forward error correction information which is used to correct an error of the
5 multicast packet train header.

11. A computer readable medium having embodied thereon a computer program for the multicast data retransmission method of claim 1.

10 12. A computer readable medium having embodied thereon a computer program for the multicast data retransmission method of claim 4.

13. A computer readable medium having embodied thereon a computer program for the multicast data retransmission method of claim 6.

15 14. A computer readable medium having embodied thereon a computer program for the structure of the multicast packet train header of claim 10.